IN THE CLAIMS:

1. (currently amended) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein ~~a hill-shaped defect is not observed on the epitaxial film~~a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an overlapping area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3 X 10^{15} atoms/cm^3 when the oxygen concentration is 7 X 10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3 X 10^{14} atoms/cm^3 when the oxygen concentration is 1.6 X 10^{18} atoms/cm^3 and between vertical straight lines on which the oxygen concentration is 9 X 10^{17} atoms/cm^3 and 1.6 X 10^{18} atoms/cm^3, respectively.

2. (currently amended) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein the number of crystal defects observed as ~~LPDs~~Light Point Defects of 120 nm or more on the epitaxial film is 20 pieces/200-mm wafer or less and wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3 X 10^{15} atoms/cm^3 when the oxygen concentration is 7 X 10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3 X 10^{14} atoms/cm^3 when the oxygen concentration is 1.6 X 10^{18} atoms/cm^3, wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative relationship of the

nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase such that the epitaxial silicon wafer has sufficient quantity of gettering sites.

3. (currently amended) A method of manufacturing a silicon single crystal ingot for a silicon wafer substrate for an epitaxial silicon wafer by Czochralski method or MCZ method, wherein silicon single crystal pulling is performed while nitrogen is being doped such that a portion of the silicon single crystal ingot has a range of nitrogen concentration and oxygen concentration, which falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, ~~while nitrogen is being doped in a region where~~and wherein the number of crystal defects observed in the epitaxial silicon wafer including the silicon wafer substrate obtained from the portion of the silicon single crystal ingot after epitaxial growth as ~~LPD~~sLight Point Defects of 120 nm or more is 20 pieces/200-mm wafer or less.

4. (currently amended) A method of manufacturing a silicon single crystal ingot by Czochralski method or MCZ method, wherein silicon single crystal pulling is performed in a range of nitrogen concentration and oxygen concentration, which falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which ~~not exceeding a range wherein~~ the nitrogen concentration is ~~about~~ 3×10^{15} atoms/cm^3 when the oxygen

concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is ~~about~~ 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and wherein the nitrogen concentration increases gradually from a shoulder portion to a tail portion of the silicon single crystal ingot whereas the oxygen concentration decreases gradually from the shoulder portion to the tail portion.

5. (currently amended) The method ~~of manufacturing a silicon single crystal ingot by the Czochralski method~~ according to claim 4, wherein the ~~oxygen concentration is lowered corresponding to an in accordance with increase in~~ nitrogen concentration in the tail portion is set less than 3×10^{15} atoms/cm^3.

6. (currently amended) A nitrogen-doped silicon wafer, wherein a range of nitrogen concentration and oxygen concentration ~~are~~falls within ~~a range~~an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is ~~about~~ 3×10^{15} atoms/cm^3 ~~or less~~ when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is ~~about~~ 3×10^{14} atoms/cm^3 ~~or less~~ when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase.

7. (currently amended) A nitrogen-doped silicon wafer, wherein a range of nitrogen concentration and oxygen concentration ~~are~~falls within ~~a range~~an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a second straight line connecting a point at which the nitrogen concentration is ~~about~~ 1 X 10^{15} atoms/cm^3 ~~or less~~ when the oxygen concentration is 7 X 10^{17} atoms/cm^3 and the nitrogen concentration is ~~about 1 X 10^{14}~~9 X10^{13} atoms/cm^3 ~~or less~~ when the oxygen concentration is ~~1.5 X 10^{18}~~1.6 X 10^{18} atoms/cm^3, and wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase.

8. (currently amended) A silicon ingot by Czochralski or MCZ method, wherein nitrogen concentration of a ~~terminal end~~tail portion of ~~a straight body section of~~ the silicon ingot is ~~in a range of~~ from 1 X 10^{15} atoms/cm^3 to 3 X 10^{15} atoms/cm^3, and wherein oxygen concentration is lowered corresponding to an in accordance with increase in nitrogen concentration from a shoulder portion to the tail portion such that the nitrogen concentration and the oxygen concentration along a longitudinal direction of the silicon ingot vary in accordance with a line in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, substantially parallel to a first straight line connecting a point at which the nitrogen concentration is 3 X 10^{15} atoms/cm^3 when the oxygen concentration is 7 X 10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3 X 10^{14} atoms/cm^3 when the oxygen concentration is 1.6 X 1018

atoms/cm^3.

9. (currently amended) The silicon ingot according to claim 8, wherein the oxygen concentration in the silicon ingot is controlled corresponding to a change in the nitrogen concentration in the silicon ingot.

10. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a second straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3.

11. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a second straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3 and on or above a horizontal straight line on which

the nitrogen concentration is 1×10^{13} atoms/cm^3.

12. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a second straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3 and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{14} atoms/cm^3.

13. (new) The epitaxial silicon wafer according to claim 2, wherein the range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an area in the graph on or below a second straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3.

14. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed,

wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an overlapping area in a graph in which the oxygen concentration and

the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively,

on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and

on or above a third straight line which is substantially parallel to the first straight line and passes a point at which the nitrogen concentration is 1×10^{14} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 such that the epitaxial silicon wafer has sufficient quantity of gettering sites.

15. (new) The epitaxial silicon wafer according to claim 12,

wherein the range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an overlapping area in a graph,

on or below a second straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and

on or above a fourth straight line which is substantially parallel to the second straight line and passes a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 such that the epitaxial silicon wafer has sufficient quantity of gettering sites.

16. (new) The epitaxial silicon wafer according to claim 12,

wherein the range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an overlapping area in a graph,

on or below a second straight line connecting a point at which the nitrogen concentration is $1 X 10^{15}$ atoms/cm^3 when the oxygen concentration is $7 X 10^{17}$ atoms/cm^3 and a point at which the nitrogen concentration is $9 X 10^{13}$ atoms/cm^3 when the oxygen concentration is $1.6 X 10^{18}$ atoms/cm^3.

17. (new) A group of epitaxial silicon wafers including respective silicon wafer substrates doped with nitrogen on which epitaxial films are formed wherein a range of nitrogen concentration and oxygen concentration in each of the silicon wafer substrates falls within an overlapping area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is $3 X 10^{15}$ atoms/cm^3 when the oxygen concentration is $7 X 10^{17}$ atoms/cm^3 and a point at which the nitrogen concentration is $3 X 10^{14}$ atoms/cm^3 when the oxygen concentration is $1.6 X 10^{18}$ atoms/cm^3 and on or above a fourth line which is substantially parallel to the first straight line and passes a point at which the nitrogen concentration is $3 X 10^{14}$ atoms/cm^3 when the oxygen concentration is $7 X 10^{17}$ atoms/cm^3 such that each of the epitaxial silicon wafers has sufficient quantity of gettering sites, and wherein the silicon wafer substrates are prepared from a single ingot.

18. (new) A group of epitaxial silicon wafers including respective silicon wafer substrates doped with nitrogen on which epitaxial films are formed wherein a range of nitrogen

concentration and oxygen concentration in each of the silicon wafer substrates falls within an overlapping area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3 and on or above a third straight line which is substantially parallel to the second straight line and passes a point at which the nitrogen concentration is 1×10^{14} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 such that each of the epitaxial silicon wafers has sufficient quantity of gettering sites, and wherein the silicon wafer substrates are prepared from a single ingot.

19. (new) A method of manufacturing the epitaxial silicon wafer recited in claim 1, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

20. (new) A method of manufacturing the epitaxial silicon wafer recited in claim 2, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

21. (new) A method of manufacturing the epitaxial silicon wafer prepared from the

silicon wafer substrate sliced from the silicon single crystal ingot manufactured by the method recited in claim 3, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

22. (new) A method of manufacturing the epitaxial silicon wafer prepared from the silicon wafer substrate sliced from the silicon single crystal ingot manufactured by the method recited in claim 4, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

23. (new) A method of manufacturing an epitaxial silicon wafer utilizing the nitrogen-doped silicon wafer recited in claim 6 as a silicon wafer substrate, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

24. (new) A method of manufacturing an epitaxial silicon wafer utilizing the nitrogen-doped silicon wafer recited in claim 7 as a silicon wafer substrate, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

25. (new) A method of manufacturing the epitaxial silicon wafer prepared from the silicon wafer substrate sliced from the silicon single crystal ingot recited in claim 8, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

26. (new) A method of manufacturing the epitaxial silicon wafer recited in claim 12, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

27. (new) A method of manufacturing the epitaxial silicon wafer recited in claim 13, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on the ground silicon wafer.

28. (new) A method of manufacturing the group of epitaxial silicon wafer recited in claim 15, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on each of the ground silicon wafers.

29. (new) A method of manufacturing the group of epitaxial silicon wafer recited in claim 16, comprising:

grinding the silicon wafer substrate, and

performing epitaxial growth on each of the ground silicon wafers.

30. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an overlapping area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3 and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{13} atoms/cm^3, and between vertical straight lines on which the oxygen concentration is 9×10^{17} atoms/cm^3 and 1.6×10^{18} atoms/cm^3, respectively.

31. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an overlapping area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3 and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{14} atoms/cm^3, and between vertical straight lines on which the oxygen concentration is 9×10^{17} atoms/cm^3 and 1.6×10^{18} atoms/cm^3, respectively.

32. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with

nitrogen on which an epitaxial film is formed, wherein the number of crystal defects observed as Light Point Defects of 120 nm or more on the epitaxial film is 20 pieces/200-mm wafer or less and wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{13} atoms/cm^3; wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase such that the epitaxial silicon wafer has sufficient quantity of gettering sites.

33. (new) An epitaxial silicon wafer including a silicon wafer substrate doped with nitrogen on which an epitaxial film is formed, wherein the number of crystal defects observed as Light Point Defects of 120 nm or more on the epitaxial film is 20 pieces/200-mm wafer or less and wherein a range of nitrogen concentration and oxygen concentration in the silicon wafer substrate falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14}

atoms/cm^3 when the oxygen concentration is 1.6 X 10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1 X 10^{14} atoms/cm^3; wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase such that the epitaxial silicon wafer has sufficient quantity of gettering sites.

34. (new) A method of manufacturing a silicon single crystal ingot for a silicon wafer substrate for an epitaxial silicon wafer by Czochralski method or MCZ method, wherein silicon single crystal pulling is performed while nitrogen is being doped such that a portion of the silicon single crystal ingot has a range of nitrogen concentration and oxygen concentration, which falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3 X 10^{15} atoms/cm^3 when the oxygen concentration is 7 X 10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3 X 10^{14} atoms/cm^3 when the oxygen concentration is 1.6 X 10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1 X 10^{13} atoms/cm^3; and wherein the number of crystal defects observed in the epitaxial silicon wafer including the silicon wafer substrate obtained from the portion of the silicon single crystal ingot after epitaxial growth as Light Point Defects of 120 nm or more is 20 pieces/200-mm wafer or less.

35. (new) A method of manufacturing a silicon single crystal ingot for a silicon wafer

substrate for an epitaxial silicon wafer by Czochralski method or MCZ method, wherein silicon single crystal pulling is performed while nitrogen is being doped such that a portion of the silicon single crystal ingot has a range of nitrogen concentration and oxygen concentration, which falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{14} atoms/cm^3; and wherein the number of crystal defects observed in the epitaxial silicon wafer including the silicon wafer substrate obtained from the portion of the silicon single crystal ingot after epitaxial growth as Light Point Defects of 120 nm or more is 20 pieces/200-mm wafer or less.

36. (new) A method of manufacturing a silicon single crystal ingot by Czochralski method or MCZ method, wherein silicon single crystal pulling is performed in a range of nitrogen concentration and oxygen concentration, which falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{13} atoms/cm^3; and wherein the nitrogen concentration increases gradually from a shoulder portion to a tail portion of the silicon single crystal ingot whereas the oxygen concentration decreases gradually

from the shoulder portion to the tail portion.

37. (new) A method of manufacturing a silicon single crystal ingot by Czochralski method or MCZ method, wherein silicon single crystal pulling is performed in a range of nitrogen concentration and oxygen concentration, which falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{14} atoms/cm^3; and wherein the nitrogen concentration increases gradually from a shoulder portion to a tail portion of the silicon single crystal ingot whereas the oxygen concentration decreases gradually from the shoulder portion to the tail portion.

38. (new) A nitrogen-doped silicon wafer, wherein a range of nitrogen concentration and oxygen concentration falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{13} atoms/cm^3; wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative

relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase.

39. (new) A nitrogen-doped silicon wafer, wherein a range of nitrogen concentration and oxygen concentration falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a first straight line connecting a point at which the nitrogen concentration is 3×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and a point at which the nitrogen concentration is 3×10^{14} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{14} atoms/cm^3; wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase.

40. (new) A nitrogen-doped silicon wafer, wherein a range of nitrogen concentration and oxygen concentration falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a second straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{13} atoms/cm^3; wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen

concentration and the nitrogen concentration have a predetermined correlative relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase.

41. (new) A nitrogen-doped silicon wafer, wherein a range of nitrogen concentration and oxygen concentration falls within an area in a graph in which the oxygen concentration and the nitrogen concentration are plotted along the horizontal axis and the vertical axis of the graph, respectively, on or below a second straight line connecting a point at which the nitrogen concentration is 1×10^{15} atoms/cm^3 when the oxygen concentration is 7×10^{17} atoms/cm^3 and the nitrogen concentration is 9×10^{13} atoms/cm^3 when the oxygen concentration is 1.6×10^{18} atoms/cm^3, and on or above a horizontal straight line on which the nitrogen concentration is 1×10^{14} atoms/cm^3; wherein the oxygen concentration and the nitrogen concentration are adjusted in a manner that the oxygen concentration and the nitrogen concentration have a predetermined correlative relationship of the nitrogen concentration increase corresponding to the oxygen concentration decrease and the nitrogen concentration decrease corresponding to the oxygen concentration increase.

Respectfully submitted,

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